APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,535	01/11/2002	Kevin W. Haulk	9872.00	9146

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EXAMINER
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ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	10/044,535	HAULK ET AL.
	Examiner	Art Unit	
	JAMES C KERVEROS	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>30 August 2004</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-16</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>30 August 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some* c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This is a Final Office Action in response to AMENDMENT filed 30 August 2004, in reply to the prior Office Action mailed May 19, 2004. Claims 1-16 are pending and under examination.

2.   Objection to the drawings, in the prior Office Action under 37 CFR 1.83(a), is withdrawn in view of the corrected drawings submitted with the Amendment.

3.   Claim Objections because of minor informalities is withdrawn in view of the Amendment to the claims.

4.   Claim rejections under 35 U.S.C. 112, first paragraph, and second paragraph with respect to claimed limitation of "controlling the content and formatting" as recited in the claim 7, is withdrawn in view of the Amendment to the claims.

Specification

5.   The abstract of the disclosure is objected to because the abstract of the disclosure does not comply with the proper language and format. The abstract should be in narrative form. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. On line 1, the phrase "is described" should be deleted. On lines 2 and 6, the term "may" should be deleted Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

6.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Briechle (US Patent No. 5,704,049), issued: December 30, 1997.

Regarding independent Claims 1 and 12, Briechle substantially discloses a

method for an electronic price display system including addressable electronic shelf

labels (ESLs) controlled by a host compute, comprising:

(a) transmitting a message (350) from a host computer (100) of the HOST SIDE

to the ESL (110) of the LABEL SIDE, FIGS. 9 and 10.

(b) waiting (WAIT) for a response to the "global query" message received by the

message (boxes 351, 352).

(c) if the response generated by (353, 354) is a negative acknowledgement

(NACK) or no response is received by the host computer, then it is an indication that

the responses from boxes (353, 354) collide on the communications channel and the

host finds a CRC error, namely each message has been garbled, the two labels

responded and no message was clearly received, FIG. 10 (box 355). If (NACK)

received, then retransmitting a sub global query message (box 356), received by the

message boxes 357 and 358, with respect to the same flag that was being tested in the global query of box 350, (col.14, lines 5-25).

Briechle does not explicitly disclose the method steps (d), (e) and (f), if the response from the ESL's is a positive acknowledgement, transmitting a "verification message" to verify the contents of the ESL's registers, waiting for a response to the verification message and then logging the message as successfully received. However, Briechle discloses a method step (364), where the host transmits a global query, and receives the response in step (368) indicating that there are no collisions, which is equivalent to a positive acknowledgement (ACK), because only one label is responding. Then host resets the particular label in steps (369 and 370), and notes the event for further processing, (Col. 14, lines 43-49). Furthermore, Briechle discloses the step of a CRC check of received messages by a label side to verify if the message was received clearly, as shown in the flowchart (FIGS. 5a and 5b), steps 140-141.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to transmit a "verification message" to the label reregister side, which includes the step of executing the CRC check step 141 after receiving a positive acknowledgement (ACK) from the label, as taught by Briechle, for the purpose of performing redundant CRC retransmission in order to verify proper CRC code transmitted with the data message, since a second CRC transmission will ensure data integrity due to redundancy.

Regarding independent Claim 7, in addition to the common limitations recited in claim 1 (steps a-d), Briechle substantially discloses an electronic shelf label (ESL)

system (FIG. 1), including plurality of ESLs (110) for displaying information relating to an item of merchandize associated with the ESL. The ESL has a plurality of registers for storing information, such as UPC (uniform product code), label ID, controlling the content and formatting of the information displayed, which typically shows a price on a liquid-crystal display 107. Briechle does not disclose means for transmitting a verification message to verify the contents of the ESL's registers if the response appears to be a positive acknowledgement, as indicated by the same obviousness rejection over the modified reference of Briechle, according to the method of claim 1.

Regarding Claims 2, 3, 13 and 14, Briechle does not explicitly disclose the method steps (g) and (h), if the response to the "verification message" is a negative acknowledgement or no response is received by the host computer, then step (g) retransmitting the message and then step (h) providing an indication of a communication problem.

However, Briechle discloses a response to a message, such as a NACK, which is a negative acknowledgement or no response received by the host computer, similar to step in (c) of claim 1 above. If NACK, then the host computer retransmits the message, and further provides an indication of a communication problem, such as error message 355, CRC error, namely the message has been garbled and no message was clearly received (col.14, lines 5-25). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to retransmit the message upon receiving NACK due to error transmission, as taught by Briechle, as to reassure that the correct data were received by the label registers.

Regarding Claims 4 and 9, Briechle does not explicitly specify that the message is a command to update at least one of the ESL's registers. However, Briechle discloses transmitting a global query message (350) from a host computer (100) received by ESL register (110), for identifying individual registers (FIGS. 9 and 10). Further, he describes an ESL is automatically updated when mounted in a new area, just as the host would also update its database when receiving the new appended location code following a response from the moved ESL (Col. 3, lines 15-18). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to automatically update an ESL register by sending a message to a register mounted in a new area, as taught by Briechle, since updates are required as different management modes are exercised (i.e., CAO, space management, etc.), or several layers of information are required to be successively displayed, even though previously stored in the ESL.

Regarding Claims 5 and 10, Briechle does not explicitly specify that the verification message is a data bedcheck message. However, Briechle discloses a "bedcheck" such as CRC check to verify if the message was received clearly (steps 140-141, FIGS. 5a and 5b). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use CRC check, as taught by Briechle, for the purpose of verifying that the message received by the ESL registers contains correct data corresponding to a register.

Regarding Claims 6, 11 and 15, Briechle does not explicitly specify that the step of transmitting verification message immediately following the receipt of the positive

acknowledgement. However, Briechle discloses the step (368), where the host receives

a message indicating that there are no collisions, in response to a positive

acknowledgement (ACK). It would have been obvious to a person having ordinary skill

in the art at the time the invention was made to use step (368), as taught by Briechle,

for the purpose of performing redundant CRC retransmission in order to verify proper

CRC code transmitted with the data message, since a second CRC transmission will

ensure data integrity due to redundancy.

Regarding Claim 8, Briechle does not explicitly specify that the host computer

waits for a response to the verification message, and if the response to the verification

message is positive acknowledgement, logging the message as successfully received,

as indicated by the same obviousness rejection over the modified reference of Briechle,

according to the method of claim 1.

Regarding Claim 16, Briechle discloses the steps (a) through (g) as applied to

claim 1 above, which are repeated a plurality of times as indicated by the "global query"

messages at steps (350) and (363) corresponding to at least two cycles as shown in

FIG. 10. Briechle does not explicitly disclose the steps of tabulating statistical data of

the number of times the response was a negative acknowledgement or no response

was received and then providing an error indication of the number exceeding a

threshold. However, Briechle provides a CRC error indication at step 355,

corresponding to a (NACK) message, which occurs whenever a negative

acknowledgement or no response received by the ESL 110. It would have been obvious

to a person having ordinary skill in the art at the time the invention was made to count

the number of (NACK) error messages in the electronic price display system of

Briechle, so as to improve the maintainability of the system by monitoring the erroneous

errors associated with RF communications links.

Response to Arguments

7.   Applicant's arguments filed 30 August 2004 have been fully considered but they

are not persuasive. Claims 1-16 are still rejected under 35 U.S.C. 103(a) as being

unpatentable over Briechle (US Patent No. 5,704,049), as set forth in the present Office

Action.

In reference to claims rejected under 35 U.S.C. 103(a) as being unpatentable

over Briechle, Applicant argues on page 12, that Briechle does not teach the verification

message indicating that the contents of the ESL'S registers match the expected

contents as indicated by a host computer, then the initial message is logged as

successfully received, as amended in the independent claims 1, 7 and 12.

In response to Applicant's argument, as described in the present Office Action,

above, Briechle does not explicitly disclose transmitting a "verification message" to

verify the contents of the ESL's registers, if the response from the ESL's is a positive

acknowledgement, ACK. However, in the Briechle reference, the host computer

transmits a global query at step (364), and receives a positive acknowledgement (ACK)

at step (368) indicating that there are no collisions in contents of the ESL's registers, as

a result of a CRC check of received messages by a label side to verify if the message

was received clearly, as shown in the flowchart (FIGS. 5a and 5b), steps 140-141. Then

the host computer notes the event that the initial message at step (350) to the ESL'S

was successfully transmitted, namely the contents of the ESL'S registers match the

expected contents as indicated by a host computer, Col. 14, lines 43-49.

It would have been obvious to a person having ordinary skill in the art at the time

the invention was made to execute the CRC check at step 141 after receiving a positive

acknowledgement (ACK) from the label as taught by Briechle, for the purpose of

performing redundant CRC retransmission in order to verify proper CRC code

transmitted with the data message, since a second CRC transmission will ensure data

integrity due to redundancy.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JAMES C KERVEROS whose telephone number is

(571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.
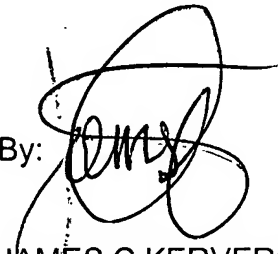
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.
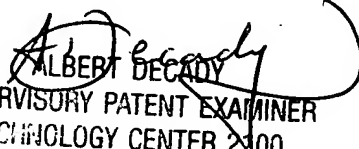
        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free).

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Date: 7 March 2005   JAMES C KERVEROS
Office Action: Final Rejection   Examiner
                                                   Art Unit 2133

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